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- (b) partial sequences[,] which are at least 14 base pairs in length of [the] a sequence[s] defined under (a),
- (c) sequences which hybridize with any of the sequences defined under (a) in 2 x SSC at 60°C[, preferably in 0.5 x SSC at 60°C, particularly preferably in 0.2 x SSC at 60°C],
- (d) sequences which exhibit at least 70% identity with any of the sequences defined under (a)[,] between position 1295 and position 2195 from SEQ ID NO: 1, or between position 432 and position 1318 from SEQ ID NO: 3, or between position 154 and position 1123 from SEQ ID NO: 5,
- (e) sequences which are complementary to the sequences defined under (a), and
- (f) sequences which, [on account of the] due to degeneracy of [the] genetic code, encode the same amino acid sequences as the sequences defined under (a), (b), (c) and [to] (d).
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2. (Amended) A [V]vector which comprises at least one nucleic acid [according to] of Claim 1.

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3. (Amended) The [V]vector [according to] of Claim 2, ~~characterized in that~~ the nucleic acid is functionally linked to regulatory sequences which ensure [the] expression of the nucleic acid in prokaryotic or eukaryotic cells.

4. (Amended) A [H]host cell which contains a nucleic acid [according to] of Claim 1 [or a vector according to Claim 2 or 3].

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5. (Amended) A [H]host cell [according to] of Claim 4, characterized in that it is a prokaryotic or a eukaryotic cell.

6. (Amended) A [H]host cell [according to] of Claim 5, characterized in that the prokaryotic cell is E.coli.

7. (Amended) A [H]host cell [according to] of Claim 5, characterized in that the eukaryotic cell is a mammalian cell or an insect cell.

8. (Amended) A [P]polypeptide which is encoded by a nucleic acid [according to] of Claim 1.

9. (Amended) An [A]acetylcholine receptor which comprises at least one polypeptide [according to] of Claim 8.

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10. (Amended) A [P]process for preparing a polypeptide [according to Claim 8, which comprises] encoded by a nucleic acid of Claim 1 comprising

- (a) culturing a host cell [according to one of Claims 4 to 7] containing a nucleic acid of Claim 1 or a vector comprising at least one nucleic acid of Claim 1 under conditions which ensure [the] expression of the nucleic acid [according to] of Claim 1, and
- (b) isolating the polypeptide from the cell or the culture medium.

11. (Amended) An [A]antibody which reacts specifically with the polypeptide [according to] of Claim 8 [or the receptor according to Claim 9].

12. (Amended) A [T]transgenic invertebrate which contains a nucleic acid [according to] of Claim 1.

13. (Amended) The [T]transgenic invertebrate [according to] of Claim 12, characterized in that it is *Drosophila melanogaster* or *Caenorhabditis elegans*.

14. (Amended) A [P]process for producing a transgenic invertebrate [according to Claim 12 or 13,] which comprises introducing a nucleic acid [according to] of Claim 1 or a vector comprising at least one nucleic acid of Claim 1 [according to Claim 2 or Claim 3].

15. (Amended) The [T]transgenic progeny of an invertebrate [according to] Claim 12 [or 13].

16. (Amended) A [P]process for preparing a nucleic acid [according to] of Claim 1, which comprises the following steps:] comprising

- (a) carrying out an entirely chemical synthesis [in a manner known per se,] or
- (b) chemically synthesizing an oligonucleotide[s], labelling the oligonucleotide[s], hybridizing the oligonucleotide[s] to the DNA of an insect cDNA library, selecting a positive clone[s] and isolating the hybridizing DNA from a positive clone[s], or
- (c) chemically synthesizing an oligonucleotide[s] and amplifying the target DNA by means of PCR.

17. (Amended) The [R]regulatory region which naturally controls transcription of a nucleic acid [according to] of Claim 1 in insect cells and ensures specific expression.

18. (Amended) A [P]process for discovering novel active compounds for plant protection, in particular, compounds which alter the conducting properties of an acetylcholine receptor[s according to Claim 9] made up of at least one polypeptide encoded by a nucleic acid of Claim 1, which comprises the following steps:

- (a) providing a host cell [according to one of Claims 4 to 7] containing a nucleic acid of Claim 1 or a vector comprising at least one nucleic acid of Claim 1,
- (b) culturing the host cell in the presence of at least one [a] compound [or a sample which comprises a multiplicity of compounds], and
- (c) detecting altered receptor properties.

19. (Amended) A [P]process for discovering a compound which binds to an acetylcholine receptor[s according to Claim 9, which encompasses the following steps:] comprising

- (a) bringing a host cell [according to one of Claims 4 to 7] containing a nucleic acid of Claim 1 or a vector comprising at least one nucleic acid of Claim 1, a polypeptide [according to Claim 8] encoded by a nucleic acid of Claim 1 or [a] an acetylcholine receptor [according to Claim 9] comprising at least one polypeptide encoded by a nucleic acid of Claim 1 into contact with [a] at least one compound [or a mixture of compounds] under conditions which permit interaction of the compound [compound(s)] with the host cell, the polypeptide or the receptor, and
- (b) determining the compound [compound(s)] which bind [bind(s)] specifically to the receptor[s].

20. (Amended) A [P]process for discovering compounds which alter the expression of an acetylcholine receptor comprising at least one polypeptide encoded by a nucleic acid of Claim 1 [receptors according to Claim 9,] which comprises the following steps:

- (a) bringing a host cell [according to one of Claims 4 to 7] containing a nucleic acid of Claim 1 or a vector comprising at least one nucleic acid of Claim 1 or a transgenic invertebrate containing a nucleic acid of